Short Communication

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Hemiplegic Cerebral Palsy Causes and its Treatment

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A retrospective population-based study of 169 instances with hemiplegic cerebral palsy (CP) from the South-western Swedish health care region covering the birth years 1969-1978 was conducted. The goal was to look at the prevalence, aetiology, and neurodevelopmental outcomes in preterm and full-term babies, as well as correlate pathogenetic periods, etiological factors, and clinical parameters to neuroradiology. The frequency was 0.66 per 1000 between the ages of 6 and 15. Postnatally acquired hemiplegia accounted for 11% of the total, with the majority of cases being postinfectious, iatrogenic, or posttraumatic. Prenatal (primarily circulatory brain lesions and maldevelopments) was the aetiology in 42 percent of term children with congenital hemiplegia (pre and perinatally derived), combined pre and perinatal in 9 percent, perinatal (cerebral haemorrhage, hypoxia) in 16 percent, and untraceable in 34 percent.

Preterm children had a similar distribution, with 29 percent, 47 percent, 25 percent, and 6%, respectively. Preterm birth was found to be 24 percent of the time in congenital instances. Birth asphyxia was found to be a poor predictor of pathogenetic phase, but a series of postpartum problems pointed to perinatal brain injury. A clinical follow-up of 152 children found that 50% had mild motor dysfunction, 31% had moderate motor dysfunction, and 19% had severe motor dysfunction. In 44 percent of the children, stereognostic sensibility was affected (astereognosia in 20 percent). Additional disabilities (mental retardation, epilepsy, impaired vision, hearing, and speech, severe behavioural/perceptual issues) were found in 42 percent of the participants. Preterm children with congenital hemiplegia were more seriously affected than term children with congenital hemiplegia. The overall handicap was classified as light in 40% of the cases, moderate in 44%, and severe in 16%. Postnatal cases had the highest rate of severe complete disability.

In 109 congenital instances, Computerised Tomography (CT) revealed cortical/subcortical cavities in 20%, unilateral ventricular enlargement in 36%, and cortical/subcortical cavities in 26%. The remaining 18% of CT findings were categorised as "other." The associations between CT findings and aetiologies were inadequate and disappointing with the categories utilised so far. CT findings, on the other hand, were found to have a substantial association with the clinical severity of the impairment and its size. Normal CT was typically associated with mild disability and moderate unilateral ventricular enlargement, whereas cortical/subcortical cavities were usually associated with severe impairment, such as mental retardation and epilepsy.

Classification

Cerebral palsy is classified based on how it affects people's movement, the body portion affected, and the severity of the effects [1].

Ataxic cerebral palsy: Clumsiness, imprecision, and instability are all characteristics of ataxic movements. The movements are not smooth and may appear choppy or disorganised. When a person with ataxia tries to make voluntary motions like walking or picking up objects, they experience incoordination. Ataxia is characterised by a loss of muscle control in the arms and legs, which leads to a loss of balance and coordination.

Ataxia patients may have the following symptoms:

- Tremor or unsteady, wobbly movements
- Maintaining equilibrium is difficult.
- Because their sense of balance and depth perception are compromised, people with ataxia appear unsteady and shaky.

Dyskinetic cerebral palsy: People with dyskinetic cerebral palsy exhibit involuntary movement that is varied (outside of their control). When a person tries to walk, these involuntary motions become more obvious.

- Dyskinetic motions can include the following:
- Dystonia is a condition that causes twisting and repetitive movements.

- Athetosis is a term for slow,'stormy' movements.
- Chorea is a dance-like movement that is irregular and unpredictable.

Spastic cerebral palsy: The most prevalent type of cerebral palsy is pastic cerebral palsy. People with spastic cerebral palsy have tight muscles, and their motions may appear stiff and jerky.

- Hypertonia, or increased muscular tone, is a type of spasticity. As a result, muscles become rigid, making movement difficult, if not impossible.

Treatment for hemiplegia begins with the brain

Hemiplegia is a condition in which one side of the body is paralysed. It usually happens after a stroke or a brain injury that impairs the brain's capacity to send correct signals to the affected muscles. The paralysed side is frequently opposite the damaged side of the brain. Because each half of the brain controls the opposing side of the body, a left hemisphere stroke can result in right sided hemiplegia.

However, it's critical to understand that the issue isn't caused by your muscles. The basis of the problem is your brain's inability to deliver information to your muscles. As a result, hemiplegia treatment focuses on re-establishing "mind-muscle" communication. Neuroplasticity, your brain's natural ability to mend and reorganise itself, makes this possible.

The best place to begin hemiplegia treatment is with passive exercise

Starting with passive exercise is the greatest way to improve hemiplegia. Assisting your affected limbs through the movements is what this means. Your therapist can assist you with this during physical therapy [2]. If you're doing physical therapy at home, you can enlist the support of a caregiver or utilise your non-affected side to help. Passive exercise, in any form, can aid neuroplasticity by engaging the brain with movement. The movement is enough to start the rewiring process, even if you aren't "doing it yourself."

We produced these free passive exercise recommendations to assist you in developing an exercise plan to overcome hemiplegia:

- Exercises that help stroke sufferers recover from paralysis.
- Stroke sufferers can benefit from range-of-motion exercises.

The first step toward hemiplegia healing is passive exercise.

Other ways to treat Hemiplegia

- Electrical Stimulation
- Mental Practice
- Mirror Therapy
- Constraint-Induced Movement Therapy
- FitMi Home Therapy

References

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